

WHAT IS CLAIMED IS:

1 1. An automatic speech recognition system, comprising:
2 a speech recognition dictionary comprising a plurality of meaning tokens each
3 associated with one or more pronunciations of one or more vocabulary words and
4 signifying a single meaning; and
5 a speech recognizer configured to convert spoken input into a sequence of
6 meaning tokens contained in the speech recognition dictionary and corresponding to
7 a sequence of vocabulary words most likely to have been spoken by a user.

1 2. The system of claim 1, wherein each meaning token is characterized by
2 a unique spelling.

1 3. The system of claim 2, wherein the spelling of a meaning token
2 facilitates extraction of meaning by a language analyzer.

1 4. The system of claim 3, wherein the spelling of a meaning token
2 encodes one or more labels identifying one or more respective application-specific
3 categories.

1 5. The system of claim 4, wherein an application-specific category
2 identified by a label encoded in the spelling of a meaning token is an object category,
3 a place category, an event category, or an action category.

1 6. The system of claim 1, wherein multiple meaning tokens are associated
2 with each of one or more polysemous vocabulary words contained in the speech
3 recognition dictionary.

1 7. The system of claim 1, further comprising a language analyzer
2 configured to extract meaning from the sequence of meaning tokens provided by the
3 speech recognizer based upon a set of task-specific semantic rules.

1 8. The system of claim 7, wherein the language analyzer is a deterministic
2 rule-based language analyzer.

1 9. The system of claim 7, further comprising an application command
2 translator configured to select an action from a set of application-specific actions
3 based upon the meaning extracted by the language analyzer, and to issue one or
4 more commands to carry out the selected action.

1 10. The system of claim 1, wherein the speech recognition dictionary is a
2 data structure stored in a computer-readable physical medium.

1 11. An automatic speech recognition method, comprising:
2 converting spoken input into a sequence of meaning tokens contained in a
3 speech recognition dictionary and corresponding to a sequence of vocabulary words
4 most likely to have been spoken by a user,
5 wherein the speech recognition dictionary comprises a plurality of meaning
6 tokens each associated with one or more pronunciations of one or more vocabulary
7 words and signifying a single meaning.

1 12. The method of claim 11, wherein each meaning token is characterized
2 by a unique spelling.

1 13. The method of claim 12, wherein the spelling of a meaning token
2 facilitates extraction of meaning by a language analyzer.

1 14. The method of claim 13, wherein the spelling of a meaning token
2 encodes one or more labels identifying one or more respective application-specific
3 categories.

1 15. The method of claim 14, wherein an application-specific category
2 identified by a label encoded in the spelling of a meaning token is an object category,
3 a place category, an event category, or an action category.

1 16. The method of claim 11, wherein multiple meaning tokens are
2 associated with each of one or more polysemous vocabulary words contained in the
3 speech recognition dictionary.

1 17. The method of claim 11, further comprising extracting meaning from
2 the sequence of meaning tokens based upon a set of task-specific semantic rules.

1 18. The method of claim 17, further comprising selecting an action from a
2 set of application-specific actions based upon the extracted meaning.

1 19. The method of claim 18, further comprising issuing one or more
2 commands to carry out the selected action.

1 20. A computer program for automatically recognizing speech, the
2 computer program residing on a computer-readable medium and comprising
3 computer-readable instructions for causing a computer to:

4 convert spoken input into a sequence of meaning tokens contained in a
5 speech recognition dictionary and corresponding to a sequence of vocabulary words
6 most likely to have been spoken by a user,

7 wherein the speech recognition dictionary resides on the computer-readable
8 medium and comprises a plurality of meaning tokens each associated with one or
9 more pronunciations of one or more vocabulary words and signifying a single
10 meaning.